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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/698,134 | 10/31/2003 | Raymond M. Genick II | 0275M-000651 | 2908 |
| 27572 | 7590 | 12/28/2005 | EXAMINER | |
| HARNESS, DICKEY & PIERCE, P.L.C. | | | MCCREARY, LEONARD | |
| P.O. BOX 828 | | | ART UNIT | |
| BLOOMFIELD HILLS, MI 48303 | | | PAPER NUMBER | |

3616

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,134

Applicant(s)

GENICK, RAYMOND M.

Examiner

Leonard J. McCreary, Jr.

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 Oct 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05 Feb 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "58" has been used to designate both fastener diameter and a first portion between a pair of channels.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The

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disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. The phrase "is disclosed" should be deleted.

The disclosure is objected to because of the following informalities: 1) In paragraph [0008] applicant refers to "cam bolt" when it appears "cam plate" is appropriate. 2) In paragraph [0026] reference numeral 58 is used to denote first the fastener diameter and second the first portion defined by the pair of channels. Different parts must be assigned different reference numerals. Appropriate corrections are required.

Claim 6 is objected to because of the following informalities: The unit "nm" corresponds to "nanometers," a unit of length. An appropriate unit for torque could be "N-m" for Newton-meters. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "The cam bolt assembly" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 1 and 15 recite the limitation "first cam plate" in line 4 and line 6, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claims 1 and 15 recites the limitation "second cam plate" in line 5 and line 7, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the first cam bolt" in line 2. There is insufficient antecedent basis for this limitation in the claim. It appears applicant intended for the claim to read "the first cam plate." Appropriate corrections are required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,669,421 to Hofschneider in view of U.S. 4,650,208 to Mason. Hofschneider discloses a Connecting Element with Eccentric Disks comprising:

- a threaded fastener 1 defining a pair of longitudinal channels 18, 20 Figures 1, 2
- a non-threaded portion 10, 12 of the fastener 1

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- a first cam plate 8 coupled to the non-threaded portion 10 of the threaded fastener 1
- a second cam plate 22 Figure 3 defining an aperture mated to the pair of longitudinal channels 18, 20

Hofschneider does not teach that either of the cam plates includes an arcuate slot.

Mason teaches the use of

- a cam plate with an arcuate slot in conjunction with an automobile suspension, the slot facilitating alignment adjustment (col 2, line 65 – col 3, line 2.)

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify Hofschneider in view of the teachings of Mason to incorporate one or more slotted cams, so as to facilitate alignment (claims 1, 2, 15, 16.)

Hofschneider teaches a cam bolt assembly with a T-shaped cross section 1

Figure 2 (claims 3, 17.)

Hofschneider teaches a longitudinal channel defining a pair of bearing surfaces

Figure 2 (claims 5, 19.)

Hofscheider teaches longitudinal channels 16, 18 are defined through fastener 1 threads 14 into the fastener core Figure 2 (claim 12.)

Hofscheider teaches a fastener comprising a shoulder portion 10 (claim 13.)

It would have been an obvious design choice to one skilled in the art at the time of invention that a cam bolt assembly used in such a suspension application should be

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capable of withstanding a torque of 150N-m in order to avoid undue component deflection or failure (claim 6.)

It would have been an obvious design choice to one skilled in the art at the time of invention to manufacture a cam bolt assembly to the dimensions set forth in claims 7-11 in order to accommodate specific suspension structure and as utilizing such dimensions is within the level of skill of one in the art.

It would have been an obvious design choice to one skilled in the art at the time of invention to use a threaded fastener within the strength class of 10.9 or better in order to increase the strength of the assembly without increasing the physical size or weight of the assembly (claims 14, 20.)

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofschneider as applied to claim 1 above, and further in view of U.S. 5,580,201 to Brilmyer. Hofschneider does not teach the first cam plate 8 is mated to the threaded fastener 10 using a knurled portion. Brilmyer teaches:

- a threaded faster with a knurl portion 48 configured to mate with the first cam plate.

It would have been obvious to one of ordinary skill in the art to modify the cam bolt assembly of Hofschneider in view of the teachings of Brilmyer to accept and retain a cam using an interference fit of a knurled portion of the fastener since this was well-known manufacturing process at the time of invention, and so as to provide a secure connection (claim 4.)

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofschneider as applied to claim 15 above, and further in view of U.S. 6,113,299 to Reichelt. Hofschneider does not teach the longitudinal channels may be partially defined by the non-threaded portion 12, 10 of the fastener 1. Reichelt teaches a threaded fastener with longitudinal channels that are

- partially defined by the non-threaded portion of the fastener.

It would have been obvious to one of ordinary skill in the art at the time of invention to extend the longitudinal channels of Hofschneider into the non-threaded portion of the fastener in view of the teachings of Reichelt in order to maintain a greater cross sectional area in the region of the cam and thus increase the strength of the fastener (claim 21.)

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Orimoto discloses a Suspension Arm Mounting Structure comprising a cam bolt assembly with a first cam plate 33 attached to a threaded fastener 31, and a second cam plate 34 defining an aperture and configured to cooperate with a slotted portion of the threaded fastener.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard J. McCreary, Jr. whose telephone number is 571-272-8766. The examiner can normally be reached on 0700-1700 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-308-2089. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Leonard J. McCreary, Jr.

Examiner

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PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600